

REMARKS

Claims 1-24 are pending and are rejected. Reconsideration and allowance of Claims 1-24 are respectfully requested.

Amendments to Specification

Applicants amend paragraph [0093] to correct a clerical error. No new matter is introduced.

Finality of Rejection

The Office Action states that Applicant's amendment necessitated the new ground of rejection. However, Applicant's original claims 1-18 were not amended in Applicant's response to the First Office Action, and therefore could not necessitate any new ground of rejection, as stated by the Office Action. Accordingly, Applicant respectfully requests that the finality of this Office Action be withdrawn.

Claim Rejections under 35 USC §102 over Blake

Claims 1, 3, and 15 are rejected under 35 USC §102(b) as being anticipated by Blake et al, "An Architecture for Differentiated Services," RFC 2475, December 1998, hereinafter referred to as Blake. Applicant respectfully traverses these rejections.

Independent Claim 1

Applicants' Claim 1 recites:

A traffic management processor for independently throttling the bandwidth of individual traffic flows, comprising:

an instruction decoder having an input to receive a throttle control instruction identifying a flow identification (ID) of a particular traffic flow to be throttled, and having an output to provide a throttle enable signal; and

a departure time calculator (DTC) circuit having an input to receive the throttle enable signal and configured to calculate a departure time for the incoming packet in response to size and bandwidth parameters associated with the incoming packet.

Blake fails to disclose or suggest a traffic management processor including "an instruction decoder having an input to receive a throttle control instruction identifying a flow identification (ID) of a particular traffic flow to be throttled, and having an output to provide a throttle enable signal," as recited in Applicants' Claim 1.

The Office Action equates Blake's traffic classifier with the instruction decoder of Claim 1, and states that "Blake's classifier reads the traffic type ID (DS codepoint) of every packet and determines (decodes) its value and then informs (sending signal) to other components of the traffic management processor for different actions (including throttling), with the traffic code of each packet being the instruction code." Applicant disagrees.

As noted by the Office Action, the MPEP provides that the pending claims must be "given their broadest reasonable interpretation consistent with the specification."¹ The MPEP also states that "this means that the words of the claim must be given their plain meaning unless the plain meaning is inconsistent with the specification."² Further, the MPEP provides that "USPTO personnel must always remember to use the perspective of one of ordinary skill in the art. Claims and disclosures are not to be evaluated in a vacuum."³

As known in the art, the term "instruction" refers to a code that includes one or more commands to be executed by a logic circuit such as a processor, and an instruction decoder is a circuit that decodes the instruction to generate corresponding control signals. In contrast, Blake specifically defines a classifier as "an entity which **selects** packets based on the content of packet headers according to defined rules."⁴ Blake's Figure 1 **clearly** depicts the classifier as receiving packets, NOT instructions. Indeed, Blake does not refer to an instruction decoder at all.

As further known in the art, an IP packet header contains fields such as traffic class, payload length, source address, and destination address; the IP packet header does NOT include an "instruction," as commonly defined in the art. Further, Blake does

1 MPEP §2111 (emphasis added).
2 MPEP §2111.01 (emphasis added).
3 MPEP §2106 (emphasis added).
4 Blake, page 4, §1.2 (emphasis added).

not suggest that an IP packet header includes an instruction, and does not suggest that the packet classifier is an instruction decoder. More specifically, the Office Action has failed to identify any language in the art to support its conclusions that a packet classifier is the same as an instruction decoder and that an IP packet header is the same as an instruction. Indeed, the conclusions reached by the Office Action are inconsistent with the plain meaning of the terms "instruction" and "instruction decoder," as defined in Applicant's specification and generally held by persons of ordinary skill in the art.

Thus, unless the Office Action can show that the plain meaning of an instruction decoder, as generally held by one of ordinary skill in the art, is the same as a packet classifier, and that the plain meaning of an instruction, as generally held by one of ordinary skill in the art, is the same as a packet header, the Office Action has not given the claims the broadest reasonable interpretation consistent with the specification, as required by the MPEP.

Accordingly, because the Office Action has not identified any language in Blake that discloses or suggests a traffic management processor including "an instruction decoder having an input to receive a throttle control instruction identifying a flow identification (ID) of a particular traffic flow to be throttled, and having an output to provide a throttle enable signal," as recited in Applicant's Claim 1, Claim 1 is not anticipated by Blake.

Claims 2-5 depend from Claim 1 and therefore distinguish over the cited references for at least the same reasons as Claim 1.

Independent Claim 15

Applicant's Claim 15 recites:

A method for selectively throttling any number of traffic flows, comprising:
receiving an incoming packet including a flow identification (ID), the flow ID indicating to which traffic flow the incoming packet belongs;
receiving a throttle control instruction including a specified flow ID indicating which traffic flow is subject to throttling;

comparing the specified flow ID with the incoming packet's flow ID to generate a throttle enable signal; and
selectively delaying transmission of the incoming packet in response to the throttle enable signal.

As discussed above with respect to Claim 1, Blake fails to disclose or suggest "an instruction decoder having an input to receive a throttle control instruction identifying a flow identification (ID) of a particular traffic flow to be throttled." Accordingly, Blake also fails to disclose or suggest "receiving a throttle control instruction including a specified flow ID indicating which traffic flow is subject to throttling," as recited in Applicant's Claim 15, and therefore Claim 15 is patentable over Blake.

Claims 16-18 depend from Claim 15 and therefore distinguish over the cited references for at least the same reasons as Claim 15.

Claim Rejections under 35 USC §102 over Heinanen

Claims 9-10 and 12-14 are rejected under 35 USC §102(b) as being anticipated by Heinanen et al "A Single Rate Three Color Marker," RFC 2697, September 1999, hereinafter referred to as Heinanen. Applicant respectfully traverses these rejections.

Independent Claim 9

Applicant's Claim 9 recites:

A method for selectively throttling individual traffic flows, comprising:

receiving an incoming packet including a bandwidth multiplier factor (BMF) and a flow identification (ID), the flow ID indicating to which traffic flow the incoming packet belongs;

receiving a throttle control instruction specifying which traffic flow is subject to throttling;

determining whether the incoming packet is part of the traffic flow specified by the throttle control instruction; and

selectively delaying transmission of the incoming packet in response to the determining.

The Office Action insists that Heinanen's "color of packet" is the same as the bandwidth multiplier factor (BMF) recited in Applicant's Claim 9. Applicant disagrees.

Applicant reminds the Office that the MPEP requires claims to be "given their broadest reasonable interpretation consistent with the specification."⁵ The "bandwidth multiplier factor (BMF)" is defined in Applicant's specification as a **factor** by which the bandwidth parameter is **adjusted** in **calculating the departure time** for a packet.⁶ In contrast, Heinanen's color of packet is a **marker** that indicates whether a packet is in compliance with a committed information rate, for example, in which "a packet is marked green if it doesn't exceed the [committed burst size] CBS, yellow if it does exceed the CBS, but not the [excess burst size] EBS, and red otherwise."⁷ Thus, in contrast to the BMF recited in Claim 9, Heinanen's "color of packet" is NOT a factor that is used in calculating departure times but rather is a marker that indicates whether the packet violates a negotiated bandwidth.

The Office Action also insists that Heinanen's "result" is the same as the throttle control instruction recited in Applicant's Claim 9. However, while the throttle control instruction of Claim 9 is an instruction that specifies **which traffic flow** is subject to throttling, Heinanen's "meter result" determines **which color a packet should be marked with** depending upon whether the packet is in compliance with the committed information rate (CIR). Thus, in contrast to Claim 9, Heinanen's meter result does NOT identify which traffic flow a packet belongs to, but rather determines whether the packet is in compliance with the committed information rate (CIR).

Accordingly, because Heinanen does not disclose or suggest "receiving an incoming packet including a bandwidth multiplier factor (BMF) and a flow identification

⁵ MPEP §2111 (emphasis added).

⁶ Applicant's specification states at paragraph [0108]: "DTC circuit 302 is modified (e.g., from earlier embodiments) to include inputs to receive EN_THRT and EN_ALL from instruction decoder 1302 and to include an input to receive a bandwidth multiplier factor (BMF) for incoming packets. In addition, DTC circuit 302 of FIG. 13 is configured to selectively adjust (e.g., multiply) the 1/BW parameter by BMF in response to EN_THRT, EN_ALL, and/or MF when calculating departure times for packets.

(ID), the flow ID indicating to which traffic flow the incoming packet belongs," "receiving a throttle control instruction specifying which traffic flow is subject to throttling," and "determining whether the incoming packet is part of the traffic flow specified by the throttle control instruction," as recited in Applicant's Claim 9, Claim 9 is patentable over Heinanen.

Claims 10-14 depend from Claim 9 and therefore distinguish over the cited references for at least the same reasons as Claim 9.

Claim Rejections under 35 USC §103

Claims 2, 4-7, 11, 16-19 and 22 are rejected under 35 USC §103(a) as being unpatentable over Blake in view of Heinanen. Applicant respectfully traverses these rejections.

Claims 2-5 depend from Claim 1 and therefore distinguish over the cited references for at least the same reasons as Claim 1.

Independent Claim 6

Applicant's Claim 6 recites:

A traffic management processor for selectively throttling traffic flows to alleviate network congestion, comprising:

an instruction decoder for receiving a throttle control instruction that specifies which traffic flows are to be throttled, and having an output to provide a throttle enable signal; and

a departure time calculator (DTC) circuit for calculating a departure time for the incoming packet in response to size and bandwidth parameters associated with the incoming packet, the DTC circuit selectively multiplying the bandwidth parameter by a bandwidth multiplier factor (BMF) in response to the throttle enable signal when calculating the departure time.

None of cited references, whether taken alone or in combination, disclose or suggest a traffic management processor that includes "an instruction decoder for

7 See Heinanen, first paragraph of section 1, page 1.

receiving a throttle control instruction that specifies which traffic flows are to be throttled, and having an output to provide a throttle enable signal," as recited in Applicants' Claim 6.

First, as discussed above with respect to Claim 1, when given the broadest reasonable interpretation in light of the specification, the "instruction decoder" recited in Applicant's claims is not the same as the packet classifier disclosed in Blake because Blake's classifier does not receive and decode an *instruction* but rather receives a packet and ***steers the packet*** to a logical instance of a traffic conditioner.

Second, as discussed above with respect to Claim 9, when given the broadest reasonable interpretation in light of the specification, the "bandwidth multiplier factor (BMF)" recited in Applicant's claims is not the same as Heinanen's color of packet because Heinanen's color of packet is not a ***factor*** that adjusts the bandwidth parameter in calculating the departure time for a packet but rather is a ***marker*** that indicates whether a packet is in compliance with a committed information rate.

Accordingly, because none of the cited references disclose or suggest a traffic management processor including "an instruction decoder for receiving a throttle control instruction that specifies which traffic flows are to be throttled, and having an output to provide a throttle enable signal" and "a departure time calculator (DTC) circuit for calculating a departure time for the incoming packet in response to size and bandwidth parameters associated with the incoming packet, the DTC circuit selectively multiplying the bandwidth parameter by a bandwidth multiplier factor (BMF) in response to the throttle enable signal when calculating the departure time," as recited in Applicant's Claim 6, Claim 6 is patentable over the cited references.

Claims 7-8 and 22 depend from Claim 6 and therefore distinguish over the cited references for at least the same reasons as Claim 6.

Claims 11-14 depend from Claim 9 and therefore distinguish over the cited references for at least the same reasons as Claim 9.

Claims 16-18 depend from Claim 15 and therefore distinguish over the cited references for at least the same reasons as Claim 15.

Claim 19 depends from Claim 1 and therefore distinguishes over the cited references for at least the same reasons as Claim 1.

Claim Rejections under 35 USC §103

Claims 20-21 and 23-24 are rejected under 35 USC §103(a) as being unpatentable over Blake in view of USP 5,875,173 to Ohgane (Ohgane). Applicant respectfully traverses these rejections.

Claims 20-21 depend from Claim 1 and therefore distinguish over the cited references for at least the same reasons as Claim 1.

Claims 22-24 depend from Claim 6 and therefore distinguish over the cited references for at least the same reasons as Claim 1.

CONCLUSION

In light of the above remarks, it is believed that Claims 1-24 are in condition for allowance and, therefore, a Notice of Allowance of 1-24 is respectfully requested. If the Examiner's next action is other than allowance as requested, the Examiner is requested to call the undersigned at (408) 236-6646.

Respectfully submitted,

A handwritten signature in black ink, consisting of a stylized 'W' followed by a long horizontal line.

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Dated